



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,933	12/14/2004	Hideaki Manaka	263117US90PCT	8636
22850	7590	03/08/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			WALBERG, TERESA J	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/516,933

Applicant(s)

MANAKA, HIDEAKI

Examiner

Teresa J. Walberg

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 11-14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/14/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Showa (JP 3-38565)(cited by applicant).

Showa discloses a heat exchanger (Fig. 1) having a plurality of heat exchange portions with pipe like headers (3, 4), parallel heat exchange tubes(1) joined to the headers, the two headers (3, 4) of the pair of adjacent heat exchange portions having ends connected to each other by a connector (10), the connector being provided at opposite sides thereof with recessed portions for the ends of the headers to be fitted therein (Figs 1 and 3), a fin (2) being disposed in an air passing space between each pair of tubes.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Showa (JP 3-38565)(cited by applicant).

Showa discloses the claimed heat exchanger structure, however, no English language abstract is available and it is unclear from the drawings whether the heat exchanger sections include a condenser and an oil cooler. It is well known in the art to use heat exchangers having similar structure as condensers and oil coolers. It would have been obvious to one of ordinary skill in the art to use the heat exchanger of Showa as a condenser and/or as an oil cooler, as a matter of intended use, since the structure shown by Showa would inherently be capable of performing the necessary functions.

5. Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Showa (JP 3-38565)(cited by applicant) in view of Zexel (JP 10-2693)(cited by applicant).

Showa discloses a heat exchanger having the claimed structure, with the exception of the peripheral wall having high and low portions. Zexel discloses a header cap (7) having high and low portions. See Figs. 1 and 2. It would have been obvious to one of ordinary skill in the art in view of Zexel to provide high and low portions on the connector portions of Showa, the motivation being to make it easier to install the connector on the header ends. While Showa and Zexel do not disclose the exact measurements of the peripheral wall portions and do not appear to teach connecting tubes having different sizes, it would have been obvious to one

of ordinary skill in the art to use any desired measurements based on intended use and based on the measurements of the other parts of the heat exchanger.

6. It is noted that an incorrect document (JP 64-2693) was received in place of cited document JP 10-2693. A copy of the correct document is attached.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Showa (JP 3-38565)(cited by applicant) in view of Krehl et al (EP 0789213)(cited by applicant).

Showa discloses a heat exchanger having the claimed structure, with the exception of a separating plate. Krehl et al discloses a separating plate (11) used in a heat exchanger. See Fig. 1. It would have been obvious to one of ordinary skill in the art in view of Krehl et al to use a separating plate between the heat exchanger portions of Showa, the motivation being prevent undesired heat transfer between the sections of the heat exchanger.

8. Claims 11-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

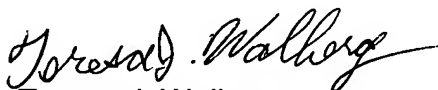
Art Unit: 3753

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Park et al, Voss, Ehlers et al, and Horiuchi are cited to show connectors used in heat exchangers.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Teresa J. Walberg
Primary Examiner
Art Unit 3753

tjw